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10/565,928	01/20/2006	Kevin R. Boyle	GB03 0120 US1	9395

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EXAMINER	
DUONG, DIEU HIEN	
ART UNIT	PAPER NUMBER
2821	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/565,928	Applicant(s) BOYLE, KEVIN R.
	Examiner DIEU HIEN T. DUONG	Art Unit 2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 20 January 2006.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-11 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-11 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 20 January 2006 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-146/08)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____

5) Notice of Informal Patent Application

6) Other: _____

DETAILED ACTION

Status of Application

1. This Office Action is a response to Applicant's Preliminary Amendment filed on 01/20/2006. In virtue of this Preliminary Amendment, claims 1-11 are currently presented in the instant application.

Priority

2. Acknowledgement is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "a means for mounting antenna" (in claim 1) must be shown or the feature canceled from the claims. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1:

Lines 6-8, the recitation "the feed comprising components for reactively tuning the antenna by tuning a relatively lower frequency inductively and a

relatively higher frequency capacitively" is unclear. It is not clear since examiner cannot determine what the phrase "relatively lower frequency inductively" and the phrase "relatively higher frequency capacitively" refer to or compare to.

Regarding claim 2:

Claim 2 is rejected since it is dependent on claim 1.

Regarding claims 3, 5-9 and 11:

The deficiencies found in claims 3 and 9 are required similar clarifications to claim 1.

Claims 4-8 and 10-11 are rejected since they are dependent on claims 3 and 9.

Regarding claims 4 and 10:

Line 2, the recitation "the components are carried by the planar antenna" is unclear. It is not clear how the planar antenna carries the components. For examination purpose, it is interpreted as "the components are mounted on the dielectric".

Clarifications are required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Sullivan et al. (US 2003/0174092), hereinafter "Sullivan".

Regarding claim 1, as best understood, Sullivan discloses, in Figures 1-3 and 10, a planar antenna assembly comprising a printed circuit board (PCB) (31) having a ground plane (30) and rf circuitry thereon (27, Fig. 1), a patch antenna (25), means (96, Fig. 10) for mounting the patch antenna (25) such that it is spaced from the ground plane (30), and a feed (15, 14, 13) for coupling the patch antenna (25) to the rf circuitry (27), the feed (15, 14, 13) comprising components (13) for reactively tuning the antenna by tuning a relatively lower frequency inductively and a relatively higher frequency capacitively.

Regarding claim 2, as applied to claim 1, Sullivan discloses, in Figures 1-3, wherein the components (13) comprises a series connected, parallel L-C network (11, 12).

Regarding claim 3, as best understood, Sullivan discloses, in Figures 1-3, 7 and 10, a communications apparatus comprising a housing (65, Fig. 7) containing a printed circuit board (PCB) (31) having a ground plane (30) and rf circuitry (27) thereon , a planar antenna (25) spaced from the ground plane (30), a dielectric (96, Fig. 10) between the PCB (31) and the planar antenna (25), and a feed (15, 14, 13) coupling the planar antenna (25) to the rf circuitry (27), the feed (15, 14, 13) comprising components (13) for reactively tuning the antenna by tuning a relatively lower frequency inductively and a relatively higher frequency capacitively.

Regarding claim 4, as applied to claim 3, Sullivan discloses, in Figures 11A-11C, wherein the components (13) are on the dielectric (96).

Regarding claim 5, as applied to claim 3, Sullivan discloses, Figure 3, wherein the components (13) are mounted on the PCB (31).

Regarding claim 6, as applied to claim 3, Sullivan discloses, in figure 3, wherein the antenna (25) is a planar inverted-L antenna (PILA).

Regarding claim 7, as applied to claim 3, Sullivan discloses, in Figure 1, wherein the components (13) comprise a series connected, parallel L-C network (11,12).

Regarding claim 8, as applied to claim 3, Sullivan discloses, in Figure 12E, wherein the components comprise a transmission line (335).

Regarding claim 9, as best understood, Sullivan discloses, in Figures 1-3 and 10, a rf module comprising a printed circuit board (PCB) (31) having a ground plane (30) and rf circuitry (27) thereon, a planar antenna (25) spaced from the ground plane (30), a dielectric (see Figure 10) in a space between the PCB (31) and the planar antenna (25), and a feed (13, 14, 15) coupling the planar antenna (25) to the rf circuitry (27), the feed (15, 14, 13) comprising components (13) for reactively tuning the antenna by tuning a relatively lower frequency inductively and a relatively higher frequency capacitively.

Regarding claim 10, as applied to claim 9, Sullivan discloses, in Figures 11A-11C, wherein the components (13) are carried by the planar antenna (25).

Regarding claim 11, as applied to claim 10, Sullivan discloses, in Figure 1, wherein the components (13) comprise a series connected, parallel L-C network (11, 12).

Inquiry

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIEU HIEN T. DUONG whose telephone number is (571)272-8980. The examiner can normally be reached on Monday - Friday, from 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Owens can be reached on 571-272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

05/06/08
DD
AU 2821

/Douglas W Owens/
Supervisory Patent Examiner, Art Unit 2821